

30. (New) An apparatus for analyzing network activity, the apparatus comprising:
a packet capturing module, for accessing the packets traversing a network, the packets
having source and destination addresses of network devices exclusive of the apparatus, and
for filtering the packets to produce packet data, wherein the packet capturing module
5 produces the packet data by accessing a predetermined address, comparing the predetermined
address to the source and destination addresses for a current packet, and retaining the current
packet when one of the source and destination addresses for the current packet matches the
predetermined address;

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a packet analyzing module, in communication with the packet capturing module, for
producing decoded packet data and for producing transaction data from the decoded packet
data; and

a data management module, in communication with the packet capturing module and
the packet analyzing module, for analyzing at least one of the packet data and the transaction
data to provide an indication of network usage.

31. (New) An apparatus for analyzing network activity, the apparatus comprising:
a packet capturing module, for accessing the packets traversing a network, the packets
having source and destination addresses of network devices exclusive of the apparatus, and
for filtering the packets to produce packet data, wherein the packet capturing module
5 produces the packet data by retrieving a predetermined port address, comparing the
predetermined port address to a source port address for a current packet, comparing the
predetermined port address to a destination port address for the current packet, and retaining

the current packet when one of the source and destination port addresses for the current packet matches the predetermined port address;

10 a packet analyzing module, in communication with the packet capturing module, for producing decoded packet data, wherein the decoded packet data includes a plurality of patterns of packets, and for producing transaction data from the decoded packet data, wherein the transaction data is derived from a time value for identifying a substantially optimal collection of patterns of packets indicative of transaction occurrences; and

15 a data management module, in communication with the packet capturing module and the packet analyzing module, for analyzing the packet data and the transaction data to provide an indication of network usage.

32. (New) An apparatus for analyzing network activity, the apparatus comprising:

a packet capturing module, for accessing the packets traversing a network, the packets having source and destination addresses other than an address corresponding to the apparatus, and for filtering the packets to produce raw packet data, wherein the packet capturing module produces the raw packet data by accessing a predetermined port address, comparing the predetermined port address to a source port address for a current packet, comparing the predetermined port address to a destination port address for the current packet, and retaining the current packet when one of the source and destination port addresses for the current packet matches the predetermined port address;

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a packet analyzing module, in communication with the packet capturing module, for producing decoded packet data and for producing transaction data from the decoded packet data; and

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a data management module, in communication with the packet capturing module and the packet analyzing module, for analyzing at least one of the raw packet data, the decoded packet data, and the transaction data to provide an indication of network usage.

33. (New) An apparatus for analyzing network activity, the apparatus comprising:

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a packet capturing module, for accessing a plurality of packets traversing a network, the packets having source and destination addresses of network devices exclusive of the apparatus, and for filtering the packets to produce packet data;

a packet analyzing module, in communication with the packet capturing module, for producing decoded packet data and for producing transaction data from the decoded packet data, the packet decoding module comprising (a) and (b) following:

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(a) a packet decoder, for accessing the packet data and producing the decoded packet data by searching in text of the packet data for one or more key words; and

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(b) a decoded packet recompiler, in communication with the packet decoder, for accessing the decoded packet data, segregating the packets from the decoded packet data into separate transactions between nodes by ordering according to thread and a time interval, sequencing the packets corresponding to each separate transaction by identifying a packet position in a pattern corresponding to each separate transaction, and linking together the data

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in each separate transaction when the identified positions are determined to produce the transaction data, wherein the transaction data is derived from a time value and identifies a collection of the patterns of packets that is substantially optimal for identifying transaction instances; and

20 a data management module, in communication with the packet capturing module and the packet analyzing module, for analyzing the packet data and the transaction data to provide an indication of network usage.

34. (New) An apparatus for analyzing network activity, the apparatus comprising:

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5 a packet capturing module, for accessing packets traversing a network, the packets having source and destination addresses of network devices exclusive of the apparatus, and for filtering the packets to produce packet data,

a packet analyzing module, in communication with the packet capturing module, for producing decoded packet data and for producing transaction data from the decoded packet data, the packet analyzing module comprising:

10 a packet decoder, for accessing the packet data and producing the decoded packet data; and

a decoded packet recompiler, in communication with the packet decoder, for accessing the decoded packet data, segregating the packets from the decoded packet data into separate transactions between nodes, sequencing the packets corresponding to each separate

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transaction, and linking together the data in each separate transaction to produce the transaction data; and

a data management module, in communication with the packet capturing module and the packet analyzing module, for analyzing at least one of the packet data and the transaction data to provide an indication of network usage.

35. (New) For use with a network activity analyzer capable of being coupled to a network transmission medium, a method of analyzing network activity, the method comprising:

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accessing packets traversing the network, the packets having source and destination addresses of network devices exclusive of the network activity analyzer;

filtering the packets to produce packet data by (a) through (c) following:

(a) accessing a predetermined address;

(b) comparing the predetermined address to the source and destination addresses for a current packet; and

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(c) retaining the current packet when one of the source and destination addresses for the current packet matches the predetermined address;

producing decoded packet data, wherein the decoded packet data includes a plurality of patterns of packets;

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producing transaction data from the decoded packet data, wherein the transaction data is derived from a time value and identifies a substantially optimal collection of patterns of packets indicative of transaction instances; and

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analyzing the packet data and the transaction data to provide an indication of network usage.

36. (New) For use with a network activity analyzer capable of being coupled to a network transmission medium, a method of analyzing network activity, the method comprising:

accessing packets traversing the network, the packets having source and destination addresses of network devices exclusive of the network activity analyzer;

filtering the packets to produce raw packet data by (a) through (c) following:

(a) accessing a predetermined address;

(b) comparing the predetermined address to the source and destination addresses for a current packet; and

(c) retaining the current packet when one of the source and destination addresses for the current packet matches the predetermined address;

producing decoded packet data;

producing transaction data from the decoded packet data; and

analyzing the decoded packet data and the transaction data to provide an indication of network usage.

37. (New) For use with a network activity analyzer capable of being coupled to a network transmission medium, a method of analyzing network activity, the method comprising:

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accessing packets traversing the network, the packets having source and destination
5 addresses of network devices exclusive of the network activity analyzer;

filtering the packets to produce packet data by: (a) accessing a predetermined port
address; (b) comparing the predetermined port address to source and destination port
addresses for a current packet; and (c) retaining the current packet when one of the source
and destination port addresses for the current packet matches the predetermined port address;

10 producing decoded packet data, wherein the decoded packet data includes a plurality
of patterns of packets;

producing transaction data from the decoded packet data, wherein the transaction data
is derived from a time value for identifying a substantially optimal collection of patterns of
packets indicative of transaction occurrences; and

15 analyzing the packet data and the transaction data to provide an indication of network
usage.

38. (New) For use with a network activity analyzer capable of being coupled
to a network transmission medium, a method of analyzing network activity, the method
comprising:

5 accessing packets traversing the network, the packets having source and destination
addresses of network devices other than an address corresponding to the network activity
analyzer;

filtering the packets to produce raw packet data by: accessing a predetermined port
address; comparing the predetermined port address to source and destination port addresses

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for a current packet; and retaining the current packet when one of the source and destination
10 port addresses for the current packet matches the predetermined port address;

producing decoded packet data;

producing transaction data from the decoded packet data; and

analyzing at least one of the decoded packet data and the transaction data to provide
an indication of network usage.

39. (New) For use with a network activity analyzer capable of being coupled to
a network transmission medium, a method of analyzing network activity, the method
comprising:

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5 accessing packets traversing the network, the packets having source and destination
addresses of network devices exclusive of the network activity analyzer;

filtering the packets to produce packet data;

producing decoded packet data by searching in text of the packet data for one or more
key words;

10 producing transaction data from the decoded packet data by (a) accessing the decoded
packet data; (b) segregating the packets from the decoded packet data into separate
transactions between nodes of the network by ordering according to thread and a time
interval; (c) sequencing the packets corresponding to each separate transaction by identifying
a packet position in a pattern corresponding to each separate transaction; and (d) linking
together the data in each separate transaction when the identified positions are determined to
15 produce the transaction data, wherein the transaction data is derived from a time value and

identifies a collection of the patterns that is substantially optimal for identifying transaction instances; and

analyzing the packet data and the transaction data to provide an indication of network usage.

40. (New) For use with a network activity analyzer capable of being coupled to a network transmission medium, a method of analyzing network activity, the method comprising:

accessing packets traversing the network, the packets having source and destination addresses other than an address corresponding to the network activity analyzer;

filtering the packets to produce raw packet data;

producing decoded packet data;

producing transaction data from the decoded packet data by accessing the decoded packet data; segregating the packets from the decoded packet data into separate transactions between nodes of the network; sequencing the packets corresponding to each separate transaction; and linking together the data in each separate transaction to produce the transaction data; and

analyzing at least one of the raw packet data, the decoded packet data, and the transaction data to provide an indication of network usage.

41. (New) For use with a network activity analyzer capable of being coupled to a network transmission medium, a method of analyzing network activity, the method comprising;

accessing packets traversing the network, the packets having source and destination
5 addresses of devices exclusive of the activity analyzer;

filtering the packets to produce packet data;

producing decoded packet data by searching in text of the packet data for one or more
key words;

producing transaction data from the decoded packet data by accessing the decoded
10 packet data; segregating the packets from the decoded packet data into separate transactions
between nodes by ordering according to thread and a time interval; sequencing the packets
corresponding to each separate transaction by identifying a packet position in a pattern
corresponding to each separate transaction; and linking together the data in each separate
transaction when the identified positions are determined to produce the transaction data,
15 wherein the transaction data is derived from a time value and identifies a collection of the
patterns that is substantially optimal for identifying transaction instances; and

producing translated transaction data from the transaction data wherein the translated
transaction data includes response data aggregated according to a fixed time interval; and

analyzing the packet data and the transaction data to provide an indication of network
20 usage.

42. (New) For use with a network activity analyzer capable of being coupled to a network transmission medium, a method of analyzing network activity, the method comprising;

accessing packets traversing the network, the packets having source and destination addresses of devices exclusive of the activity analyzer;

filtering the packets to produce packet data;

producing decoded packet data;

producing transaction data from the decoded packet data by accessing the decoded packet data; segregating the packets from the decoded packet data into separate transactions between nodes; sequencing the packets corresponding to each separate transaction; and linking together the data in each separate transaction;

producing translated transaction data from the transaction data; and

analyzing the packet data and the transaction data to provide an indication of network usage.

43. (New) An apparatus for analyzing network activity, the apparatus comprising:

means for accessing packets traversing the network, the packets having source and destination addresses of devices exclusive of the network activity analyzer;

means for filtering the packets to produce packet data, wherein the means for filtering the packets to produce packet data includes routines for retrieving a predetermined address; comparing the predetermined address to the source and destination addresses for a current

packet; and retaining the current packet when one of the source and destination addresses for the current packet matches the predetermined address;

means for producing decoded packet data, wherein the decoded packet data includes
10 a plurality of patterns of packets;

means for producing transaction data from the decoded packet data, wherein the transaction data is derived from a time value for identifying a substantially optimal collection of patterns of packets indicative of transaction instances; and

means for analyzing the packet data and the transaction data to provide an indication
15 of network usage.

44. (New) An apparatus for analyzing network activity, the apparatus comprising:

means for accessing packets traversing the network, the packets having source and destination addresses of devices exclusive of the network activity analyzer;

means for filtering the packets to produce packet data, wherein the means for filtering
5 the packets to produce packet data includes routines for retrieving a predetermined address; comparing the predetermined address to the source and destination addresses for a current packet; and retaining the current packet when one of the source and destination addresses for the current packet matches the predetermined address;

means for producing decoded packet data;

means for producing transaction data from the decoded packet data; and
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means for analyzing the packet data and the transaction data to provide an indication of network usage.

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45. (New) An apparatus for analyzing network activity, the apparatus comprising:
means for accessing packets traversing the network, the packets having source and destination addresses for network devices exclusive of the network activity analyzer;

means for filtering the packets to produce packet data, wherein the means for filtering
5 the packets to produce packet data includes routines for accessing a predetermined port address; comparing the predetermined port address to a source port address for a current packet; comparing the predetermined port address to a destination port address for the current packet; and retaining the current packet when one of the source and destination port addresses for the current packet matches the predetermined port address;

means for producing decoded packet data, wherein the decoded packet data includes
a plurality of patterns of packets;

means for producing transaction data from the decoded packet data, wherein the transaction data is derived from a time value for identifying a substantially optimal collection of packets indicative of transaction occurrences; and

15 means for analyzing the packet data and the transaction data to provide an indication of network usage.

46. (New) An apparatus for analyzing network activity, the apparatus comprising:
means for accessing packets traversing the network, the packets having source and destination addresses for network devices other than an address corresponding to the network activity analyzer;

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5 means for filtering the packets to produce raw packet data, wherein the means for
filtering the packets to produce raw packet data includes routines for retrieving a
predetermined port address; comparing the predetermined port address to a source port
address for a current packet; comparing the predetermined port address to a destination port
address for the current packet; and retaining the current packet when one of the source and
10 destination port addresses for the current packet matches the predetermined port address;
means for producing decoded packet data;
means for producing transaction data from the decoded packet data; and
means for analyzing at least one of the decoded packet data and the transaction data
to provide an indication of network usage.

47. (New) An apparatus for analyzing network activity, the apparatus comprising;
means for accessing packets traversing the network, the packets having source and
destination addresses other than an address corresponding to the network activity analyzer;
means for filtering the packets to produce packet data;
5 means for producing decoded packet data by searching in text of the packet data for
one or more key words;
means for producing transaction data from the decoded packet data, wherein the
means for producing transaction data includes routines for accessing the decoded packet data;
segregating the packets from the decoded packet data into separate transactions between
10 nodes by ordering according to thread and a time interval; sequencing the packets
corresponding to each separate transaction by identifying a packet position in a pattern

corresponding to each separate transaction; and linking together the data in each separate transaction when the identified positions are determined to produce the transaction data, wherein the transaction data is derived from a time value and identifies a collection of the patterns that is substantially optimal for identifying transaction instances; and

means for analyzing the packet data and the transaction data to provide an indication of network usage.

48. (New) An apparatus for analyzing network activity, the apparatus comprising; means for accessing packets traversing the network, the packets having source and destination addresses other than an address corresponding to the network activity analyzer; means for filtering the packets to produce raw packet data;

means for producing decoded packet data; means for producing transaction data from the decoded packet data, wherein the means for producing transaction data includes routines for accessing the decoded packet data; segregating the packets from the decoded packet data into separate transactions between nodes; sequencing the packets corresponding to each separate transaction; and linking together the data in each separate transaction to produce the transaction data; and

means for analyzing the decoded packet data and the transaction data to provide an indication of network usage.

REMARKS

Claims 29 through 48 are substantially copied from U.S. Patent No. 5,787,253 granted July 28, 1998 to McCreery, et al. and assigned to the A.G. Group in accordance with